Utah

Electronic Laboratory Reporting Specifications for Communicable Diseases

Version 1.0

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PURPOSE

This document is a supplement to The Communicable Disease Rule, and details what test types are considered reportable for each of the conditions identified in the Communicable Disease Rule. UDOH strongly encourages electronic reporters to use automated computer algorithms to identify reportable laboratory tests for transmission to public health. Algorithms should be programmed using the guidance in this document and routinely validated.

A separate document is available for entities who report manually (via fax, email, or post), as reporting specifications differ slightly.

REPORTABLE TESTS

ANTIBIOTIC RESISTANT ORGANISMS

Condition: Carbapenem resistant organism Organisms: Acinetobacter species, Enterobacter species, Escherichia coli, and Klebsiella species that are resistant to carbapenems		
Reportable Test	Reportable Result	Quantitation Required
Antibiotic susceptibility, any method (automated, E-test, Kirby-Bauer, etc.) ¹	Resistant ²	Yes
Phenotypic presence of carbapenemase (Modified Hodge test)	Positive	No
Genotypic presence of carbapenemase (PCR)	Positive	No

¹When an organism is determined to be carbapenem resistant, all other susceptibility testing on the organism, with the associated MIC values, and the culture results must be reported.

²Laboratories should report carbapenem resistance using the most current CLSI breakpoints (June 2013).

Condition: Staphylococcus aureus, vancomycin intermediate or resist Organisms: Staphylococcus aureus	ant	
Reportable Test	Reportable Result	Quantitation Required
Antibiotic susceptibility, any method	Resistant, Intermediate ¹	Yes

 $^{^{1}}$ Staphylococcus aureus is considered intermediate/resistant when the MIC value for vancomycin is \geq 4.

ENTERIC DISEASES - BACTERIAL

Condition: Botulism Organisms: Clostridium botulinum		
Reportable Test	Reportable Result	Quantitation Required
Culture	Positive	No
Botulinum toxin	Positive	No

Condition: Campylobacteriosis		
Organisms: Campylobacter species		
Reportable Test	Reportable Result	Quantitation Required
Antigen, any method	Positive	No
Culture	Positive	No
Nucleic acid detection	Positive	No

Condition: Clostridium difficile infection Organisms: Clostridium difficile		
Reportable Test	Reportable Result	Quantitation Required
Antibody to cytocoxin	All	No
Culture	All	No
Nucleic acid detection	All	No

Condition: Escherichia coli, Shiga-toxin producing Organisms: Enterohemorrhagic E. coli, and Shiga-toxin		
Reportable Test	Reportable Result	Quantitation Required
Antibody against Shiga-toxin, serum	Positive	No
Culture	Positive	No
Detection of Shiga-toxin	Positive	No
Nucleic acid detection	Positive	No

Condition: Listeriosis Organisms: Listeria species		
Reportable Test	Reportable Result	Quantitation Required
Culture	Positive	No

¹Only isolates from sterile sites are reportable. This includes, but is not limited to, blood, bone, fetal tissue, muscle (when covered by intact skin), sterile fluids (CSF, joint, vitreous, pleural, peritoneal, pericardial), or internal body site (lymph node, brain, heart, liver, spleen, kidney, pancreas, ovary, placenta).

Condition: Salmonellosis and typhoid fever Organisms: Salmonella species		
Reportable Test	Reportable Result	Quantitation Required
Antibiotic susceptibility, any method ¹	All	No
Culture	Positive	No

¹Complete antibiotic susceptibility results are reportable when performed on Salmonella species.

Condition: Shigellosis Organisms: Shigella species		
Reportable Test	Reportable Result	Quantitation Required
Antibiotic susceptibility, any method ¹	All	No
Culture	Positive	No
Nucleic acid detection ²	Positive	No

 $^{^1}$ Complete antibiotic susceptibility results are reportable when performed on $\it Shigella$ species.

²This includes results that do not differentiate between *Shigella* and Enteroinvasive *E. coli* (EIEC).

Condition: Vibriosis, including cholera Organisms: Vibrio species		
Reportable Test	Reportable Result	Quantitation Required
Culture	Positive	No
Antitoxin or anti-vibriocidal antibody	Positive for Vibrio cholerae O1 or O139	No
Nucleic acid detection	Positive	No

ENTERIC DISEASES - VIRAL AND PARASITIC

Condition: Cryptosporidiosis		
Organisms: Cryptosporidium species		
Reportable Test	Reportable Result	Quantitation Required
Antibody, any method	Positive	No
Antigen, any method	Positive	No
Microscopic identification	Positive for oocysts	No
Nucleic acid detection	Positive	No

Condition: Cyclosporiasis Organisms: Cyclospora cayetanensis		
Reportable Test	Reportable Result	Quantitation Required
Microscopic identification	Positive for oocysts	No
Nucleic acid detection	Positive	No

Condition: Giardiasis Organisms: Giardia lamblia		
Reportable Test	Reportable Result	Quantitation Required
Antibody, any method	Positive	No
Antigen, any method	Positive	No
Microscopic identification	Positive for oocysts or trophozoites	No
Nucleic acid detection	Positive	No

Condition: Norovirus Organisms: Norovirus		
Reportable Test	Reportable Result	Quantitation Required
Nucleic acid detection	Positive	No

Condition: Trichinellosis		
Organisms: Trichinella species organism or larvae		
Reportable Test	Reportable Result	Quantitation Required
Antibody, any method	Positive	No
Microscopic identification	Identification of	No
Microscopic identification	Trichinella larvae	No

HIV/AIDS

Condition: HIV/AIDS		
Organisms: Human immunodeficiency virus		
Reportable Test	Reportable Result	Quantitation Required
Antibody/antigen screening test ¹	Positive and equivocal/indeterminate	No
Antigen screening test ²	Positive and equivocal/indeterminate	No
Antibody screening test ²	Positive and equivocal/indeterminate	No
Antiviral susceptibility test results (via sequencing, genotyping, or phenotypic analysis)	All ³	No
Confirmatory and supplemental tests (e.g. Western Blot)	All ³	No
Culture	All ³	No
Genotype (viral sequencing)	All ³	No
Nucleic acid detection (Qualitative viral load)	All ³	No
p24 antigen test²	Positive and equivocal/indeterminate	No
Rapid test	Positive and equivocal/indeterminate	No
Viral Load (Quantitative viral load)	All ³	Yes
Typing ⁴	All ³	No

 $^{^{1}}$ This is a 4th generation EIA - generally HIV 1/2 + Ag.

MYCOBACTERIAL INFECTIONS (INCLUDING TUBERCULOSIS AND LEPROSY)

Condition: Mycobacterial infections, including tuberculosis and leprosy Organisms: Mycobacterium species		
Reportable Test	Reportable Result	Quantitation Required
Acid fast stain	All ²	Yes
Antibiotic susceptibility, any method ¹	All ²	No
Biopsy	Positive	No
Culture, acid fast bacillus	All ²	No
Culture, speciated	All ²	No
Quantiferon TB minus NIL	All ²	Yes
Nucleic acid detection	All ²	No
T-Spot	All ²	No

¹Complete antibiotic susceptibility results are reportable when performed on Mycobacterium tuberculosis isolates.

²This is a 3rd generation EIA - generally HIV1+O+HIV2.

³All test results are reportable. This includes positive/reactive, indeterminate, equivocal, and negative/non-reactive.

⁴This test differentiates HIV 1 from HIV 2 (e.g. Multispot, Geenius).

²All test results are reportable. This includes positive/reactive, indeterminate, equivocal, and negative/non-reactive.

SEXUALLY TRANSMITTED DISEASES

Condition: Chancroid		
Organisms: Haemophilus ducreyi		
Reportable Test	Reportable Result	Quantitation Required
Culture	Positive	No

Condition: Chlamydia trachomatis infection Organisms: Chlamydia trachomatis		
Reportable Test	Reportable Result	Quantitation Required
Antigen, any method	All ¹	No
Culture	All ¹	No
Nucleic acid detection	All ¹	No

¹All test results are reportable. This includes positive/reactive, indeterminate, equivocal, and negative/non-reactive.

Condition: Gonorrhea Organisms: Neisseria gonorrhoeae		
Reportable Test	Reportable Result	Quantitation Required
Antigen, any method	All ¹	No
Culture	All ¹	No
Gram stain	Gram negative intracellular diplococci	No
Nucleic acid detection	All ¹	No

¹All test results are reportable. This includes positive/reactive, indeterminate, equivocal, and negative/non-reactive.

Condition: Syphilis Organisms: Treponema palladium		
Reportable Test	Reportable Result	Quantitation Required
Antibody (including DFA-TP, TPPA, FTA)	All ¹	No
IgG and IgM treponemal serology test (FTA, TP-PA, MHA-TP, EIA, latex agglutination)	All ¹	Yes
Microscopic identification	Positive for spirochete	No
Rapid plasma reagin (RPR) test	All ¹	No
Venereal Disease Research Laboratory (VDRL) test	All ¹	No

¹All test results are reportable. This includes positive/reactive, indeterminate, equivocal, and negative/non-reactive.

VACCINE PREVENTABLE AND INVASIVE DISEASES

Condition: Chickenpox Organisms: Varicella zoster virus		
Reportable Test	Reportable Result	Quantitation Required
Antibody, including IgG	Positive	Yes
Antigen, any method	Positive	No
Culture	Positive	No
Nucleic acid detection	Positive	No

Condition: Diphtheria		
Organisms: Corynebacterium diphtheriae		
Reportable Test	Reportable Result	Quantitation Required
Culture	Positive	No
Histopathology	Positive	No
Nucleic acid detection	Positive	No

Condition: Haemophilus influenzae, invasive Organisms: Haemophilus influenzae		
Reportable Test	Reportable Result	Quantitation Required
Culture ¹	Positive	No
Antigen, any method ²	Positive	No

¹Only isolates from sterile sites are reportable. This includes, but is not limited to, blood, bone, muscle (when covered by intact skin), sterile fluids (CSF, joint, vitreous, pleural, peritoneal, pericardial), or internal body site (lymph node, brain, heart, liver, spleen, kidney, pancreas, ovary, etc).

²Only reportable if specimen source is CSF.

Condition: Influenza infection Organisms: Influenza A and influenza B		
Reportable Test	Reportable Result	Quantitation Required
Antibody, IgM	Positive	No
Antigen, any method	Positive	No
Culture	Positive	No
Nucleic acid detection	Positive	No
Rapid test	Positive	No

Condition: Meningitis/encephalitis Organisms: Any bacteria, virus, parasite, protozoa, or fungus		
Reportable Test	Reportable Result	Quantitation Required
Antibody, IgM¹	Positive	No
Culture ¹	Positive	No
Nucleic acid detection ¹	Positive	No

¹Only reportable if specimen source is CSF.

Condition: Meningococcal disease, invasive Organisms: Neisseria meningitidis		
Reportable Test	Reportable Result	Quantitation Required
Antigen, latex agglutination ¹	Positive	Yes
Antigen, immunohistochemistry ²	Positive	No
Gram stain ¹	Positive for Gram negative diplococci	No
Culture ³	Positive	No
Nucleic acid detection ³	Positive	No

¹Only reportable if specimen source is CSF.

²Formalin-fixed tissue.

³Only isolates from sterile sites are reportable. This includes, but is not limited to, blood, bone, muscle (when covered by intact skin), sterile fluids (CSF, joint, vitreous, pleural, peritoneal, pericardial), or internal body site (lymph node, brain, heart, liver, spleen, kidney, pancreas, ovary, etc).

Condition: Mumps Organisms: Mumps virus		
Reportable Test	Reportable Result	Quantitation Required
Antibody, including IgG	Positive	Yes
Culture	Positive	No
Nucleic acid detection	Positive	No

Condition: Pertussis (whooping cough) Organisms: Bordetella pertussis		
Reportable Test	Reportable Result	Quantitation Required
Antibody, IgM	Positive	No
Antigen, any method	Positive	No
Culture	Positive	No
Nucleic acid detection	Positive	No

Condition: Polio Organisms: Poliovirus		
Reportable Test	Reportable Result	Quantitation Required
Antibody, including IgG	Positive	Yes
Culture	Positive	No
Nucleic acid detection	Positive	No

Condition: Rubella Organisms: Rubella virus		
Reportable Test	Reportable Result	Quantitation Required
Antibody, including IgG	Positive	Yes
Culture	Positive	No
Nucleic acid detection	Positive	No

Condition: Smallpox Organisms: Variola virus		
Reportable Test	Reportable Result	Quantitation Required
Antibody, IgM	Positive	No
Culture	Positive	No
Nucleic acid detection	Positive	No

Condition: Smallpox vaccination, adverse reaction Organisms: Vaccinia virus (Orthopox genus)		
Reportable Test	Reportable Result	Quantitation Required
Antibody, any method	Positive	No
Culture	Positive	No
Nucleic acid detection	Positive	No

Condition: Streptococcal disease, invasive Organisms: Streptococcus species		
Reportable Test	Reportable Result	Quantitation Required
Antibiotic susceptibility, any method ¹	All	No
Culture ²	Positive	No

¹Complete antibiotic susceptibility results are reportable when performed on *Streptococcus pneumoniae* isolates from sterile sites

VECTORBORNE/ZOONOTIC DISEASES - BACTERIAL

Condition: Anaplasmosis/ehrlichiosis Organisms: Anaplasma phagocytophilum, Ehrlichia chaffeensis, and Ehrlichia ewingii		
Reportable Test	Reportable Result	Quantitation Required
Antibody, including IgG	Positive	Yes
Antigen, any method	Positive	No
Culture	Positive	No
Nucleic acid detection	Positive	No
Microscopic identification	Positive for morulae	No

Condition: Anthrax		
Organisms: Bacillus anthracis		
Reportable Test	Reportable Result	Quantitation Required
Antigen, including Red Line Alert	Positive	No
Antibody to Protective Antigen (PA)	Positive	No
Culture	Positive	No
Nucleic acid detection	Positive	No
Lethal Factor by Mass Spectrometry	Positive	No

Condition: Brucellosis		
Organisms: Brucella species		
Reportable Test	Reportable Result	Quantitation Required
Antibody, any method	Positive	No
Culture	Positive	No
Nucleic acid detection	Positive	No

Condition: Lyme disease Organisms: Borrelia burgdorferi		
Reportable Test	Reportable Result	Quantitation Required
Antibody, including IgG ¹	All ²	Yes
Culture	All ²	No
Nucleic acid detection	AII ²	No

 $^{^{1}\}mbox{Western}$ Blot test results should include the number of bands identified.

²Only isolates from sterile sites are reportable. This includes, but is not limited to, blood, bone, muscle (when covered by intact skin), sterile fluids (CSF, joint, vitreous, pleural, peritoneal, pericardial), or internal body site (lymph node, brain, heart, liver, spleen, kidney, pancreas, ovary, placenta).

²All test results are reportable. This includes positive/reactive, indeterminate, equivocal, and negative/non-reactive.

Condition: Plague Organisms: Yersinia pestis		
Reportable Test	Reportable Result	Quantitation Required
Antibody, including IgG and Fraction 1 (F1) antigen	Positive	Yes
Antigen, Fraction 1 (F1)	Positive	No
Culture	Positive	No

Condition: Psittacosis Organisms: Chlamydia psittaci		
Reportable Test	Reportable Result	Quantitation Required
Antibody, including IgG	Positive	No
Culture	Positive	No
Nucleic acid detection	Positive	No

Condition: Q fever Organisms: Coxiella burnetii		
Reportable Test	Reportable Result	Quantitation Required
Antibody, any method, including phase 1 or 2	Positive	Yes
Antigen, any method	Positive	No
Culture	Positive	No
Nucleic acid detection	Positive	No

Condition: Relapsing fever Organisms: Borrelia species (not burgdorferi)		
Reportable Test	Reportable Result	Quantitation Required
Antibody, any method	Positive	No
Culture	Positive	No
Microscopic identification	Positive for spirochetes	No

Condition: Spotted fever rickettsiosis Organisms: Rickettsia species		
Reportable Test	Reportable Result	Quantitation Required
Antibody, including IgG	Positive	Yes
Antigen, any method	Positive	No
Culture	Positive	No

Condition: Tularemia		
Organisms: Francisella tularensis		
Reportable Test	Reportable Result	Quantitation Required
Antibody, including IgG	Positive	Yes
Antigen, any method	Positive	No
Culture	Positive	No
Nucleic acid detection	Positive	No

VECTORBORNE/ZOONOTIC DISEASES - VIRAL

Condition: Arboviral infection, West Nile virus and Zika virus Organisms: West Nile and Zika virus		
Reportable Test	Reportable Result	Quantitation Required
Antibody, including plaque reduction neutralization	Positive	No
Antigen, any method	Positive	No
Culture	Positive	No
Nucleic acid detection	Positive	No

Condition: Arboviral infection, other Organisms: Cache Valley, California encephalitis, Chikungunya, Dengue, Eastern equine encephalitis, Jamestown Canyon, Japanese encephalitis, Keystone, Lacrosse, Powassan, Snowshoe hare, St Louis encephalitis, Trivittatus, Venezuelan equine encephalitis, Western equine encephalitis, and Yellow Fever virus		
Reportable Test	Reportable Result	Quantitation Required
Antibody, including IgG and plaque reduction neutralization	Positive	Yes ¹
Antigen, any method	Positive	No
Culture	Positive	No
Nucleic acid detection	Positive	No

 $^{^1\!\}text{Titer}$ quantitation must be reported, including IgM P/N ratio must be reported.

Condition: Colorado tick fever Organisms: Colorado tick fever virus		
Reportable Test	Reportable Result	Quantitation Required
Antibody, including IgG	Positive	No
Culture	Positive	No

Condition: Hantavirus infection		
Organisms: Hantavirus (Sin Nombre virus)		
Reportable Test	Reportable Result	Quantitation Required
Antibody, including IgG	Positive	Yes
Antigen, any method	Positive	No
Nucleic acid detection	Positive	No

Condition: Rabies		
Organisms: Lyssavirus		
Reportable Test	Reportable Result	Quantitation Required
Antibody, Rabies Neutralizing	Positive	Yes ¹
Antigen, any method	Positive	No
Culture	Positive	No
Nucleic acid detection	Positive	No

¹Positive or complete virus neutralization at 1:5 dilution.

Condition: Viral hemorrhagic fever Organisms: Crimean-Congo hemorrhagic fever, Ebola, Guanarito, Junin, Lassa, Lujo, Machupo, Marburg, Rift Valley fever, and Sabia viruses		
Reportable Test	Reportable Result	Quantitation Required
Antibody, including IgG	Positive	No
Antigen, any method	Positive	No
Culture	Positive	No
Nucleic acid detection	Positive	No

VECTORBORNE/ZOONOTIC DISEASES - PARASITIC

Condition: Babesiosis Organisms: Babesia species		
Reportable Test	Reportable Result	Quantitation Required
Animal Inoculation	Positive	No
Antibody, including IgG	Positive	Yes
Microscopic identification	Identification of intraerythrocytic Babesia organisms	No
Nucleic acid detection	Positive	No

Condition: Leptospirosis		
Organisms: Leptospira species		
Reportable Test	Reportable Result	Quantitation Required
Antibody, IgM	Positive	No
Culture	Positive	No

Condition: Malaria		
Organisms: Plasmodium species		
Reportable Test	Reportable Result	Quantitation Required
Blood film/smear	Identification of Plasmodium parasite	Blood film/smear
Nucleic acid detection	Positive	Nucleic acid detection
Rapid antigen test (RDT)	Positive	Rapid antigen test (RDT)

VIRAL HEPATITIS

Condition: Hepatitis A virus infection Organisms: Hepatitis A virus		
Reportable Test	Reportable Result	Quantitation Required
Antibody, IgM	All ¹	No

¹All test results are reportable. This includes positive/reactive, indeterminate, equivocal, and negative/non-reactive.

Condition: Hepatitis B virus infection		
Organisms: Hepatitis B virus		
Reportable Test	Reportable Result	Quantitation Required
Antibody, IgM, core	All ¹	No
Antigen, including surface and e antigen	All ¹	No
Genotype	All ¹	No
Nucleic acid detection	All¹	Yes

 $^{^1\!}$ All test results are reportable. This includes positive/reactive, indeterminate, equivocal, and negative/non-reactive.

Condition: Hepatitis C virus infection		
Organisms: Hepatitis C virus		
Reportable Test	Reportable Result	Quantitation Required
Antibody (anti-HCV and signal/cutoff ratio)	All¹	No
Genotype	All ¹	No
Immunoblot or RIBA	All ¹	No
Nucleic acid detection	All¹	No

¹All test results are reportable. This includes positive/reactive, indeterminate, equivocal, and negative/non-reactive.

Condition: Hepatitis, viral, other Organisms: Hepatitis D virus, hepatitis E virus, and hepatitis G virus		
Reportable Test	Reportable Result	Quantitation Required
Antibody, IgM	Positive	No
Antigen, any method	Positive	No

Condition: Liver function tests, associated with viral hepatitis ca Organisms: NA	ases ¹	
Reportable Test	Reportable Result	Quantitation Required
Alanine amino transferase (ALT)	All ²	Yes
Aspartate aminotransferase (AST)	All ²	Yes
Bilirubin	All ²	Yes

¹Liver function tests are reportable when the specimen collection date is within 90 days of the specimen collection date of a positive test for viral hepatitis. For entities that cannot report using these specifications, all liver function tests may be reported.

OTHER DISEASES

Condition: CD4 Test Organisms: NA		
Reportable Test	Reportable Result	Quantitation Required
Value, total and percent ¹	All	Yes

¹All values from all patients are reportable. This is no longer limited to just HIV patients.

²All test results are reportable.

Condition: Coccidioidomycosis Organisms: Coccidioides species		
Reportable Test	Reportable Result	Quantitation Required
Antibody, including IgG	Positive	Yes
Culture, Fungal	Positive	No
Histopathology	Positive	No
Nucleic acid detection	Positive	No

Condition: Cytomegalovirus, infant Organisms: Cytomegalovirus		
Reportable Test	Reportable Result	Quantitation Required
Antibody, including IgG	All ¹	No
Culture	All ¹	No
Nucleic acid detection	All ¹	No

¹All test results in children less than one year of age are reportable. This includes positive/reactive, indeterminate, equivocal, and negative/non-reactive.

Condition: Legionellosis Organisms: Legionella species		
Reportable Test	Reportable Result	Quantitation Required
Antibody, including IgG	Positive	Yes
Antigen, any method	Positive	No
Culture	Positive	No
Nucleic acid detection	Positive	No

Condition: SARS		
Organisms: SARS coronavirus		
Reportable Test	Reportable Result	Quantitation Required
Antibody, any method	Positive	No
Culture	Positive	No
Nucleic acid detection	Positive	No

Condition: Transmissible Spongiform Encephalopathies Organisms: All prions, such as CJD, vCJD, iCJD, fCJD, Gerstmann-Straussler-Scheinker syndrome or Kuru		
Reportable Test	Reportable Result	Quantitation Required
14-3-3	Positive	No
Immunohistochemistry	Positive	No
PrP Gene Sequencing by PCR	Positive	Yes
Neuron-Specific Enolase	Positive	No
Tau protein	Positive	No
Western Blot	Positive	No

ADDITIONAL RESOURCES

Utah Code 26-6: The Utah Communicable Disease Control Act

https://le.utah.gov/xcode/Title26/Chapter6/26-6.html

Utah Administrative Rule 386-702: The Communicable Disease Rule

https://rules.utah.gov/publicat/code/r386/r386-702.htm

Communicable Disease Reporting Webpage

http://health.utah.gov/epi/reporting/

Utah Department of Health ELR Webpage

http://health.utah.gov/epi/elr

CONTACT INFORMATION

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Reporting Mailing List

To join the mailing list to receive notifications about changes or clarifications to the Communicable Disease Rule, email reporting@utah.gov.

VERSION HISTORY

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3/20/2017	V1.0	Document created